BURNHAM Commercial Boilers

SERIES 4FH- 50

Power Flame Burner Information

5.0 rating

Boiler Size	Burner Model: Gas and Gas/#2 Oil	Burner Model: #2 Oil	Motor Horsepower: Gas	Motor Horsepower: #2 Oil Gas/#2 Oil	Voltage	Firing Sequence [1]: Gas	Firing Sequence [1]: #2 Oil Gas/#2 Oil	Standard UL Flame Safeguard: Gas	Standard UL Flame Safeguard: #2 Oil	Standard UL Flame Safeguard: Gas/#2 Oil	Gas Train: Size	Gas Train: Min. Pres.	Gas Train: Max. Pres.
4FH-63	CR1-G(O)-10	CR1-O	1/3	1/3	120/60/1	On-Off	On-Off	RM7897A/UV	R7184P/CC	RM7897C/UV	1	4.9" w.c.	14.0" w.c.
4FH-78	CR1-G(O)-10	CR1-O	1/3	1/3	120/60/1	On-Off	On-Off	RM7897A/UV	R7184P/CC	RM7897C/UV	1	5.3" w.c.	14.0" w.c.
4FH-92	CR1-G(O)-10	CR1-O	1/3	1/2	120/60/1	On-Off	On-Off	RM7897A/UV	R7184P/CC	RM7897C/UV	1	5.7" w.c.	14.0" w.c.
4FH-107	CR1-G(O)-12	CR1-O	1/3	1/2	120/60/1	On-Off	On-Off	RM7897A/UV	R7184P/CC	RM7897C/UV	1	5.1" w.c.	14.0" w.c.
4FH-127	C2-G(O)-15	C2-OA	1/2	3/4	240/60/1[2]	L-H-O	L-H-O	RM7897A/UV	R7184P/CC	RM7897C/UV	1 1/4	4.4" w.c.	14.0" w.c.
4FH-154	C2-G(O)-15	C2-OA	1/2	3/4	240/60/1[2]	L-H-O	L-H-O	RM7897A/UV	R7184P/CC	RM7897C/UV	1 1/4	6.1" w.c.	14.0" w.c.
4FH-180	C2-G(O)-15	C2-OA	1/2	3/4	240/60/1[2]	L-H-O	L-H-O	RM7897A/UV	R7184P/CC	RM7897C/UV	1 1/4	7.2" w.c.	14.0" w.c.
4FH-209	C2-G(O)-20B	C2-OB	1	1 1/2	240/60/1	L-H-O	L-H-O	RM7897A/UV	R7184P/CC	RM7897C/UV	1 1/4	8.0" w.c.	14.0" w.c.
4FH-240	C2-G(O)-20B	C2-OB	1	1 1/2	240/60/1	L-H-O	L-H-O	RM7897A/UV	R7184P/CC	RM7897C/UV	2	5.1" w.c.	14.0" w.c.
4FH-277	C2-G(O)-20B	C2-OB	1	1 1/2	240/60/1	L-H-O	L-H-O	RM7897A/UV	R7184P/CC	RM7897C/UV	2	5.8" w.c.	14.0" w.c.
4FH-311	C3-G(O)-20	C3-O	1 1/2	2	3-phase[3]	L-H-O	L-H-O	RM7897C/UV	R7184P/CC	RM7897C/UV	2	4.8" w.c.	14.0" w.c.
4FH-345	C3-G(O)-20	C3-O	1 1/2	2	3-phase[3]	L-H-O	L-H-O	RM7897C/UV	RM7897A/UV	RM7897C/UV	2	5.7" w.c.	14.0" w.c.
4FH-360	C3-G(O)-20	C3-O	1 1/2	2	3-phase[3]	L-H-O	L-H-O	RM7897C/UV	RM7897A/UV	RM7897C/UV	2	5.4" w.c.	14.0" w.c.
4FH-450	C3-G(O)-25B	C3-OB	3	3	3-phase[3]	L-H-O	L-H-O	RM7897C/UV	RM7897A/UV	RM7897C/UV	2 / 2 1/2[4]	8.2" w.c.	14.0" w.c.
4FH-563	C4-G(O)-30	C4-OB	5	5	3-phase[3]	L-H-O	L-H-O	RM7897C/UV	RM7897A/UV	RM7897C/UV	2 1/2	7.2" w.c.	14.0" w.c.
4FH-675	C5-G(O)-30	C5-O	7 1/2	7 1/2	3-phase[3]	Full Mod	Full Mod	RM7840L/UV	RM7840L/UV	RM7840L/UV	2 1/2	9.6" w.c.	14.0" w.c.
4FH-827	C5-G(O)-30	C5-O	7 1/2	7 1/2	3-phase[3]	Full Mod	Full Mod	RM7840L/UV	RM7840L/UV	RM7840L/UV	2 1/2	10.4" w.c.	14.0" w.c.
4FH-993	C5-G(O)-30	C5-O	7 1/2	7 1/2	3-phase[3]	Full Mod	Full Mod	RM7840L/UV	RM7840L/UV	RM7840L/UV	3	12.6" w.c.	28.0" w.c.
4FH-1157	C6-G(O)-30	C6-O	10	10	3-phase[3]	Full Mod	Full Mod	RM7840L/UV	RM7840L/UV	RM7840L/UV	3	16.1" w.c.	28.0" w.c.
4FH-1323	C6-G(O)-30	C6-O	10	10	3-phase[3]	Full Mod	Full Mod	RM7840L/UV	RM7840L/UV	RM7840L/UV	3	19.1" w.c.	28.0" w.c.

[1] Explanation of Firing Sequences:

Gas and Gas Sequence on Combination Gas/Oil Boilers

On-Off	On-Off, fixed fire with slow opening gas valve, fixed air.
L-H-L	Low fire start (not proven), high fire run, Lo-Hi-Off gas valve, two stage air control.
Full Mod	Full modulation with proven low fire start.

Oil and Oil Sequence on Combination Gas/Oil Boilers

On-Off LFS	Fixed air low fire start.
L-H-O	Low fire start (not proven), high fire run, oil cylinder air control .
Full Mod	Full modulation with proven low fire start.

[2] Voltage on gas burner model is 120/60/1.

[3] On 3-phase voltage, must specify 208, 230, or 460/60/3 on order.

[4] Model 4F-450 - Dual size gas trains: Leak test cock, main gas valve and auxiliary gas valve are indicated by the first number; gas regulator and main shutoff cock are indicated by the second number.

BURNHAM Commercial Boilers

SERIES 4FH-50

Power Flame Burner Equipment

Equipment	Fuel	Description
Control Cabinet	Gas, #2 Oil, Gas/#2 Oil	NEMA 1A with hinged door.
Control Voltage Transformer	Gas, #2 Oil, Gas/#2 Oil	Included when burner voltage is greater than 120/60/1.
Motor Starter	Gas, #2 Oil, Gas/#2 Oil	Contactor on all single phase motors. Magnetic starter with overload protection on 3-phase motors.
Fusing	Gas, #2 Oil, Gas/#2 Oil	Control circuit only.
Ignition	Gas and Gas/#2 Oil	Gas/Electric pilot w/ manual valve, solenoid valve, regulator.
	#2 Oil	Direct spark (4F-63 and larger). Gas/Electric pilot (4F-675 and larger) w/ manual valve, solenoid valve, regulator.
Signal Lights	Gas, #2 Oil, Gas/#2 Oil	Two [power on and fuel on].
Air Flow Safety Switch	Gas and Gas/#2 Oil	All models.
	#2 Oil	Models 4F- 345 and larger.
Gas Train	Gas and Gas/#2 Oil	UL gas train for minimum inlet pressure indicated on Burner Information table. Shipped unassembled and consisting of the following: ● Manual shut-off valve. ● Gas pressure regulator - low pressure appliance type Combination gas valve and pressure regulator (4F-63 to 4F-277). Separate gas valve and pressure regulator (4F-311 and larger.) ● Manual leak test valve. ● Automatic gas valve: Diaphragm type with On-Off sequence. Motorized all others (Proof of closure on 4F-311 and larger.) ● Safety gas valve: Auxiliary gas valve on all models. ● High and Low gas pressure switches: Models 4F- 311 and larger.
Oil Pump	#2 Oil and Gas/#2 Oil	Two stage, integral with burner (4F-63 to 4F-675). Two stage, separate 3/4 HP motor mounted on boiler skid (4F-827 and larger).
Fuel Changeover	Gas/#2 Oil	Manual switch.

BURNHAM Commercial Boilers

SERIES 4FH

Power Flame "JR' Gas Burner Information

Boiler Size	Burner Model	Motor		Firing Sequence [1]	Standard UL Flame Safeguard	Gas Train		
		Horsepower	Voltage			Size	Min. Pres.	Max. Pres.
4FH-63	JR15A-10	1/4	120/60/1	On-Off	RM7897A/FR	1	4.8" w.c.	14.0" w.c.
4FH-78	JR30A-10	1/3	120/60/1	On-Off	RM7897A/FR	1	4.7" w.c.	14.0" w.c.
4FH-92	JR30A-12	1/3	120/60/1	On-Off	RM7897A/FR	1	6.5" w.c.	14.0" w.c.
4FH-107	JR30A-12	1/3	120/60/1	On-Off	RM7897A/FR	1 1/4	3.8" w.c.	14.0" w.c.
4FH-127	JR50A-15	1/3	120/60/1	On-Off	RM7897A/FR	1 1/4	4.4" w.c.	14.0" w.c.
4FH-154	JR50A-15	1/3	120/60/1	On-Off	RM7897A/FR	1 1/4	7.4" w.c.	14.0" w.c.
4FH-180	JR50A-15	1/2	120/60/1	On-Off	RM7897A/FR	1 1/2	5.9" w.c.	14.0" w.c.

[1] Explanation of Firing Sequence: On-Off, fixed fire with slow opening gas valve, fixed air.

Burner Equipment

Equipment	Description
Ignition	Gas/Electric pilot.
Air Flow Safety Switch	All models.
Gas Train	UL gas train for minimum inlet pressure indicated on Burner Information table. Shipped unassembled and consisting of the following: ● Manual shut-off valve. ● Gas pressure regulator - low pressure appliance type Combination gas valve and pressure regulator (4F-63 to 4F-180). ● Manual leak test valve. ● Automatic gas valve: Diaphragm type with On-Off sequence. ● Safety gas valve: Auxiliary gas valve on all models.
Pilot Gas Controls	All models with gas/electric pilot have manual pilot shut-off valve, soft seat low gas pressure regulator and solenoid gas valve.

NOTE: Flame safeguard is mounted on junction box; control panel is not included.